

24 (2)

AUTHORS:

Koptsik, V. A., Minayeva, K. A., SOV/55-58-6-12/31
Voronkov, A. A., Solov'yev, A. F., Izrailenko, A. N.,
Popkova, Ye. G., Kozlova, G. I.

TITLE:

Investigation of New Piezoelectric Crystals on Small-dimensioned Samples (Issledovaniye p'yezoelektricheskikh kristallov na malykh obraztsakh)

PERIODICAL:

Vestnik Moskovskogo universiteta. Seriya matematiki,
mekhaniki, astronomii, fiziki, khimii, 1958, Nr 6,
pp 91-98 (USSR)

ABSTRACT:

In 1955 one of the authors succeeded in developing a simple method of investigating crystalline dielectrics with respect to their piezoelectricity (Ref 1) by the mechanical excitation of piezoelectric oscillations at low frequency near crystal resonance. The strength of the piezoelectric effect was determined from the ratio to a quartz standard. Part of the results of investigations carried out with 1200 crystalline dielectrics are given by two tables (Table 1: 186 crystals with smaller piezoelectric effect than quartz; table 2: 111 crystals with a greater effect). It was further found in the course of the investigations that a fact of great

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Investigation of New Piezoelectric Crystals on Small- dimensioned Samples SOV/55-58-6-12/31

importance for the theory of piezoelectrics is the rule governing the distribution of piezoelectric crystals according to space groups of symmetry which are favorable to the piezoelectric effect. This fact may be of use for the detection of new piezoelectrics among the dielectrics with known space symmetry. It was further found that the symmetry assumed in the case of many substances was too high. The authors thank A. V. Shubnikov for supervising work, and A. N. Kost, V. M. Belikov and a number of other comrades for placing the crystal samples at their disposal. There are 2 tables and 9 references, 8 of which are Soviet.

ASSOCIATION: Kafedra kristallofiziki (Chair for Crystal Physics)
SUBMITTED: June 11, 1958

Card 2/2

PYATENKO, Yu.A.; VORONKOV, A.A.

Vlasovite, a zirconium silicate with a new type of silicon-oxygen radical. Dokl. AN SSSR 141 no.4:958-961 D '61. (MIRA 14:11)

1. Institut mineralogii, geokhimii i kristallokhimii redkikh elementov AN SSSR. Predstavлено akademikom N.V. Belovym.
(Lovozero tundras—Zirconium silicates)
(Minerals)

TETERYUKOV, V.I., kand.tekhn.nauk; VORONKOV, A.E., inzh.

New centrifugal immersion pump for transferring nitric acid.
Khim.mash. no.2:5-6 Mr '62. (MIRA 15:3)
(Centrifugal pumps) (Nitric acid)

TETERIUKOV, V.I., kand.tekhn.nauk; VORONKOV, A.E., inzh.

Pump for the transfer of sulfuric acid. Khim.mashinestr. no.5:
7-8 S-0 '63. (MIRA 16:10)

34450
S/184/62/000/002/001/004
D041/D112

11.1160

AUTHORS: Tetaryukov, V.I., Candidate of Technical Sciences; Voronkov,
A.E., Engineer

TITLE: New drowned centrifugal pump for pumping-over nitric acid

PERIODICAL: Khimicheskoye mashinostroyeniye, no. 2, 1962, 5-6

TEXT: The authors describe the design and operation of a test model of the 4 BX A-18 (4VKhA-18) vertical, single-stage, drowned centrifugal pump for pumping-over 15 to 60-% nitric acid at temperatures of up to 50°C. The pump has a capacity of 60 m³/hour at a pressure of 20 m of water column, a 63-% efficiency, and a speed of 2,930 r.p.m. Its electric motor has a capacity of 9 kw. The pump can operate at a submersion depth of the impeller ranging from 2 m to zero. Industrial tests of the pump proved satisfactory; after working 4000 hrs with a delivery of 37.5 m³/hr and 5720 hrs with a delivery of 45 m³/hr, no mechanical breakdowns or noticeable traces of corrosion were observed, although one of the teflon bearings showed wear of ✓

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New drowned centrifugal pump ...

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0.25 mm. The pump has been recommended for serial production. There are
2 figures.

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VORONKOV, A.I.

Closed-loop 35 kv. power distribution network. Trudy LIZI
no.41-99-100 '62. (MIRA 17:6)

1. Leningradskaya vysokovoltneya set'.

IL'SHTEYN, Aleksandr Mikhaylovich, kand. tekhn. nauk; GAYDUKOV,
Viktor Ivanovich; ZAKUTSKIY, Igor' Aleksandrovich;
VORONKOV, A.K., otv. red.

[Settling of the roof without battery stulls in longwalls
of flat seams] Bezorgannaia posadka krovli v lavakh pologikh
plastov. Moskva, TSentr. in-t tekhn. informatsii ugol'noi
promyshl., 1962. 51 p. (MIRA 17:7)

VORONKOV, A.K., inzh.; POLESIN, Ya.L., inzh.

The coal-mining industry on the eve of the 21st Congress of the CPSU.
Bezop.truda v prom. 3 no.1:3-5 Ja '59. (MIRA 12:3)
(Coal mines and mining)

VORONKOV, A.K.; MURIN, I.D.; SUKHOV, L.V.; SHTRANIKH, I.V.

Device for automatic processing of photographic emulsions by
the television-raster method. Prib.i tekhn.eksp. 7 no.1t42-49
Ja-F '62. (MIRA 15:3)

1. Fizicheskiy institut AN SSSR.
(Photography, Particle track)(Television in science)

24.6830

21.6000

AUTHORS: Voronkov, A.K., Murin, I.D., Sukhov, L.V.,
Shtranikh, I.V.

TITLE: An apparatus for the automatic survey of nuclear
photo-emulsions by a television roster method
II. The recording system

PERIODICAL: Pribory i tekhnika eksperimenta, no.1, 1962, 42-43

TEXT: In the study of cosmic rays and other nuclear processes,
thick layer photo-emulsion plates are used for recording charged
particles. The resulting tracks in the emulsion are studied
under a microscope. In the particular cases when emulsions are
exposed in artificial satellites and in accelerators, a very large
amount of work is entailed in surveying the plates. Using a device
for the automatic television survey of nuclear photo-emulsions,
previously described by the present authors (Ref.1: PTE, No.2,
1961, 63), the rate of making measurements on scattering and
ionization of particles is accelerated by 10 to 100 times.
Some of the main characteristics of the apparatus are as follows:
1) type of microscope МБИ8 (MBI8) (modified);

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An apparatus for the automatic ...

- 2) measurement of ionization velocities of 20 to 100 micron/sec;
- 3) measurement of scattering velocities up to 200 micron/sec;
- 4) accuracy of measuring scattering tracks \pm 0.01 micron;
- 5) length of measured track (maximum) 50 mm;
- 6) limit of microcursor \pm 250 micron;
- 7) capacity of analyser channels 999 impulses;
- 8) frequency of figure printing \sim 75 symbols/sec;
- 9) power consumption \sim 3 KW
- 10) number of valves, 500.

The method of measuring ionization track lengths and multiple scattering is described in detail. A special form of oscillating microscope objective for scanning the plate, with automatic focusing, is used. The microscope stage is moved synchronously in steps of 2 mm. This usually produces up to 6 impulses and corresponds to 64 frames on the television presentation. The time between each group of pulses is used for damping the system and improving the focusing. The stability and accuracy of the results obtained is also considered. Some of the essential requirements in this respect are:

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An apparatus for the automatic ...

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- 1) Maintenance of contrast, which depends on, a) the amplification coefficient of the video-amplifier; b) the sensitivity of the transmitting tubes; c) the intensity of illumination.
 - 2) Maintenance of the linearity of the amplifier and accuracy of focusing.
- There are 3 figures.

ASSOCIATION: Fizicheskiy institut AN SSSR
(Physics Institute AS USSR)

SUBMITTED: June 10, 1961

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VORONKOV, A.K.

← Improve the quality of engineering work. Bezop. truda v prom. 6
no.12:2-3 D '62. (MIRA 15:12)
(Coal mines and mining--Safety measures)

VORONKOV, A.K., inzh.

Mechanization and automation lead to the improvement of working conditions. Bezop. truda v prom. 3 no.4:1-2 Ap '59.
(MIRA 12:6)
(Industrial management)

VORONKOV, A.K., inzhener; KHAVIN, A.F.; VILIN, A.M., otvetstvennyi
redaktor; SHPAK, E.G., tekhnicheskiy redaktor.

[At the Kizel coal basin] Kizelovskom ugol'nom basseine,
Moskva, Ugletekhizdat, 1951. 209 p. [Microfilm] (MLRA 7:12)
(Kizel Basin--Coal mines and mining)

VORONKOV, A. K.

SERGEYEV, A.A., red.; ANPILOGOV, I.M., red.; ASSONOV, V.A., red.; BABALANTS, N.A., red.; BABOKIN, I.A., red.; BALAMUTOV, A.D., red.; BOGORODSKIY, N.N., red.; BOLCHENKO, D.H., red.; BUCHNEV, V.K., red.; VAKHMINSEV, G.S., red.; VORONKOV, A.K., red.; GARKALENKO, K.I., red.; GORBATOV, P.Ye., red.; GOLOVLMV, V.Ya., red.; DOKUCHAYEV, M.M., red.; DUBNOV, L.V., red.; YEVTEYEV, A.D., red.; YEREMENKO, Ye.K., red.; ZENIN, N.I., red.; KRIVONOGOV, K.K., red.; KUPALOV-YAROPOLIK, I.K., red.; MATSYUK, V.G., red.; NIKOLAYEV, S.I., red.; ONISHCHUK, K.N., red.; PETROV, K.P., red.; PILYUGIN, B.A., red.; PLATONOVA, A.A., red.; POLESIN, Ya.L., red.; POKROVSKIY, L.A., red.; PONETUN, D.Ye., red.; POLYUSHKIN, A.Kh., red.; REYKHER, V.P., red.; SEDOV, N.A., red.; SIDORENKO, I.T., red.; FIDELEV, A.A., red.; CHAKHMAKHCHEV, A.G., red.; CHEMODOROV, M.Ya., red.; SHUMAKOV, A.A., red.; YARENKO, N.Ye., red.; PARTSEVSKIY, V.N., red.izd-va; ATTOPOVICH, M.K., tekhn.red.

[Standard safety regulations for blasting operations] Edinyye pravila bezopasnosti pri vzryvnykh rabotakh. Izd.2. Moskva, Gos. nauchno-tekhnik.izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1958. 318 p. (MIRA 13:1)

1. Russia (1923- U.S.S.R.) Komitet po nadzoru za bezopasnym vedeniyem rabot v promyshlennosti i gornomu nadzoru.
(Mining engineering--Safety measures)

VORONKOV, A. K.

At the Kizel coal basin Moskva, Ugletekhizdat, 1953.

(Mic 55-3513)

Collation of the original, as determined from the film: 210 p.

Microfilm Slavic 396 T

l. Coal mines and mining - Russia - Kizel Basin.

I. Khavin, Abram Filippovich, jt. au.

VORONOV, A. N.

v Kuznetskoye ugol'nom bassaine [In the Kuzel Coal Basin]. Moscow, Uralstekhnizdat, 1953.
210 p.

SC: Monthly List of Russian Acquisitions, Vol 7, No. 3, June 1954.

VORONKOV, A. K.

In the Kizel Coal Basin (V Kizelovskom ugol'nom basseyne) Moscow: Ugletekhizdat
1953. 210 pp. illus., diags.

VORONKOV, A.N.

New method of loading paper into railroad cars. Bum. prom.
31 no.11:23-24 N '56. (MLRA 10:2)

1. Nachal'nik otdela sybta Balakhinskogo tsellyuloznobumazhnogo kombinata.
(Paper--Transportation)

VORONKOV, A.N.

The mechanization of labor consuming tasks in paper storage warehouses. Bum.prom. 31 no.1:23-24 Ja '56 (MLRA 9:5)

1. Balakhninskiy tsellyulozno-bumzhnyy kombinat.
(Balakhna--Paper industry) (Fork-lift trucks)

VORONKOV, A. V.

33096

Zemlyanye Raboty Na Stroitel, Stve Moskovskogo Gosudarstvennogo Universiteta,
Mekhanizatsiya Trudoemkikh I Tyazhelykh Rabot, 1949, No 10, c. 5-9

SO: Letopis' Zhurnal'nykh Statey, Vol. 45, Moskva, 1949

ABROSIMOV, P. V.; VCRONKOV, A. V.

Moscow - Buildings

Construction of tall edifice of the Moscow State University. Gor. khoz. Mosk. 26 no. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, April 1952. Unclassified.

VORONKOV, A. V.

USSR/Scientific Organization - Moscow
University Oct 53

"A Victory of Soviet Constructors-- the New Buildings of Moscow State University," A.V. Voronkov,
Chief of Construction, and M.I. Makarov - Asst
Chief of Tech Dept of Construction

Vest Mos Univ, Ser Fizkomat i Yest Nauk, No 7,

ZP 5-12

State that the high 32-story 'Glavnaya Zdaniye Universiteta' (Main Building of the University) is the center of future construction to rise in the new southwest rayon of Moscow, where two million m² of living space will be constructed by 1960.

23135

PONOMARENKO, P.K.; YASNOV, M.A.; NESMEYANOV, A.N.; VORONKOV, A.V.; PETROVSKIY,
H.G.

Opening the new buildings of the Moscow State University. Vest.Nosk.un.8
no.9:5-15 S '53. (MLRA 6:11)
(Moscow University--Buildings)

VORONKOV, A.V.; MAKAROV, N.I.

Victory of Soviet building engineers. Vest.Mosk.un. 8 No.10:5-12 O '53.
(MLRA 7:1)

1. Nachal'nik stroitel'stva (for Voronkov). 2. Zamstitel' nachal'nika
tekhnicheskogo otdala stroitel'stva (for Makarov).
(Moscow university--Buildings)

VORONKOV, A.V.; MAKAROV, N.I.; SVERDLOV, N.B.; FILIMONOV, I.N.

Engineering equipment of the new buildings of Moscow State University.
Gor.khoz.Mosk. vol.27 no.9:11-16 S '53. (MIAA 6:10)
(Moscow University)

L 16659-66 EWT(m)/EPF(n)-2/ETC(f)/ENG(m) VII
ACC NR: AP6005537 (A) SOURCE CODE: UR/0039/00/020/001/0067/0068

AUTHOR: Artamkin, V. N.; Voronkov, A. V.

50

13

ORG: none

TITLE: Burnup in a plane layer

SOURCE: Atomnaya energiya, v. 20, no. 1, 67-68

TOPIC TAGS: nuclear engineering, particle distribution, optic thickness, nuclear fuel, fuel consumption

ABSTRACT: The authors consider variations in the spatial distribution of absorber nuclei for a plane nondiffusing layer with an arbitrary (but symmetric) location of the absorber in the moderating medium. An ordinary first order differential equation is derived which gives the spatial distribution of absorber nuclei at an arbitrary moment of time. Graphs are given showing the distribution of the absorber through the layer during burnup as well as the relationship between optical thickness and time. Orig. art. has: 3 figures, 8 formulas.

SUB CODE: 20,18/ SUBM DATE: 30Jun65/ ORIG REF: 001/ OTH REF: 002

Card 1

UDC: 691.039.51

2

VORONKOV, A.

Economic efficiency as the most important factor. Mor. plot 25
no.2:8-10 F '65. (MIRA 18:4)

KANTOROVICH, Yakov Borisovich; VORONKOV, A.V., red.; KRUGLOVA, Ye.M.,
red. izd-va; TIKHONOV, Ye.A., tekhn. red.

[Operation and economics of sea transportation] Voprosy eksplu-
atatsii i ekonomiki morskogo transporta. Moskva, Izd-vo
"Morskoi transport," 1962. 402 p. (MIRA 15:8)
(Shipping--Cost of operations)

VORONKOV, A.V.

Method of averaging the points of observation in determining
effective velocities in an integral form. Razved.i prom.geofiz,
no.44:3-11 '62. (MIRA 15:7)
(Seismic prospecting)

VORONKOV, A.V.

New data on the manifestation of alkaline magma in the
northern Siberian Platform. Inform.biul. NIIKA no.13:
38-41 '59. (MIRA 13:5)
(Yessey, Lakes—Rocks, Igneous)

VORONKOV, A.V.

Geological structure of Stolbovyy Island of Novosibirskiy Islands.
Trudy nauch.-issl. inst. geol. Arkt. 85:37-43. '58.
(MIRA 12:8)

(Stolbovyy Island—Geology)

VORON'KOV, A. V.

BAKAYEV, Viktor Georgiyevich; VORON'KOV, A.V., red.; DIZHUR, I.M., red.izd-vn;
LAVRENOVA, N.B., tekhn.red.

[The Soviet merchant marine during the last 40 years] Morskoi transport
SSSR za 40 let. Moskva, Izd-vo "Morskoi transport," 1957. 101 p.
(MIRA 11:1)

(Merchant marine)

21398

S/120/61/000/002/008/042
E192/E382

24.6600

AUTHORS: Voronkov, A.Ye., Galaktionov, A.I., Murin, I.D.,
Sukhov, L.V. and Shtranikh, I.V.

TITLE: An Instrument for Automatic Inspection of Nuclear
Photo-emulsions by the Television Raster Method.
I. Servo Systems

PERIODICAL: Pribory i tekhnika eksperimenta, 1961, No. 2,
pp. 63 - 68 + 1 plate

TEXT: The following two types of problems can be solved
by using nuclear photo-emulsions:

1) search for the required events (stars and tracks from a
given direction and density, etc.) and determining the number
of such events in a given volume of emulsion;
2) inspection or scanning of chosen tracks in order to
determine their scattering ionisation, etc.

An automatic instrument capable of performing the following
operations on photo-emulsions is described:

a) automatic following of a given track in three coordinates

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An Instrument for

with continuous reading of the instantaneous coordinates X_1, Y_1, Z_1 and time t necessary for moving to the next coordinates, increments in the angle φ of the direction of the trace during time t and the determination of the multichannel ionisation spectrum of the trace;

b) automatic measurement of multiple scattering of a given track by the coordinate method with the reading of the instantaneous first, second and third differences, length of a cell, time t taken to move along the cell, determination of the spectrum of the positive and negative second differences and the ionisation spectrum of the track;

c) determination of the tracks in a given direction with automatic following of these tracks.

Only the servo system of the equipment is described, while the apparatus for recording the output data such as coordinates and time is not mentioned. The system is based on the use of the video signals which are obtained during the scanning of a section of a photo-emulsion, which is seen in the field of a projection microscope and is projected

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An Instrument for

on the photocathode of a television-camera tube (type JIN-101 (LI-101)). In order to obtain the maximum ratio of track signal/background noise the slots which are usually employed in such equipment were eliminated (Refs. 1-3). The system is based on the principle of digital recording. Each field of the television picture is counted as the number of grains in a track; the deviation of the track from its central position in the field of vision of the camera tube is similarly recorded. On this basis it was possible to design an instrument capable of tracking only one grain (in the absence of background grains) which corresponds to the signal/noise ratio of about 1/400 over a segment of track 200 μ long. The functioning of the system is as follows. Of all these signals, from each line of the television reproduction of the picture, only those are selected which enter the so-called control zone a which is from 2 - 24 μ wide (depending on the chosen width of the zone and magnification of the microscope). Initially, the investigated track is introduced into this zone. The control zone is situated

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An Instrument for

in the middle of the lines and is divided into four sub-zones, I - IV; secondly, horizontally, it is divided into eight equal lanes, 1-8, having a width of $0.25 - 0.27 \mu$ (and minimum duration of $0.25 \mu s$). The signals of the television picture from the camera 1 (Fig. 2 gives the block diagram of the equipment) are applied to the amplifier 2, where they are shaped by an artificial line 3 whose length can be adjusted from $0.1 - 0.5 \mu s$. The signals then pass through a fast limiting circuit 4 and are applied to a control unit 5. Simultaneously, these signals can be observed on the screen of a control television receiver 26. The deviation of a track from its so-called central position with regard to the four sub-zones is determined in the control unit 5. The deviations of the track from its central position can be of three kinds:

- a) lateral deviations α ;
- b) angular deviations β , and
- c) mixed deviations γ , where both the lateral and angular deviations are observed.

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An Instrument for

The deviation k is expressed as the number of pulses corresponding to the number of the lanes ℓ multiplied by the number of lines n in a sub-zone which intersect the elements of a track, i.e. $k = \ell n$. The television system is based on interlaced scanning with 50 fields per second, the full number of lines being 567. For purely technical reasons, only two-thirds of all the lines of each field are used. This amounts to about 94 lines per sub-zone for a field so that for the maximum detuning for a thick trace in one sub-zone the deviation is $k = 578$ pulses. The deviation of a track from its central position in the control zone is determined separately for all four sub-zones, for each third field, by means of four counter circuits 6 - 9 of the preliminary dividers and finally by means of four storage interpolators 10 - 13 (see Fig. 2). The logical control circuit 14, which is coupled to 10 - 13, produces a mismatch signal when the track deviates from its central position; the signal is then applied to the servo mechanisms of the microscope which eliminate the "mismatch". The

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E192/E382

An Instrument for

equilibrium state is characterised by a minimum and equal count from all four sub-zones for each third field, which corresponds to the position of the track between the lanes 4 and 5. The microscope is M6N-8 (MBI-8) and it is furnished with seven collector-type motors (A2.P (D2R)) which operate seven control screws through suitable reduction gears and reversible magnetic clutches. The functions of these control organs are as follows (Fig. 2): M_1 and M_2 - displacement along the coordinates X_1 and Y_1 ; M_3 - displacement along the coordinate X_2 ; M_6 - displacement along the coordinate Z_2 (micrometer drive for the focusing); M_4 - displacement along the coordinate Y_2 or the displacement of the microscope eyepiece; M_5 - rotation of the Dovey prism; M_7 - positioning of the microscope table. For convenience, all the motors can be manually operated by means of suitable

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An Instrument for

keys. The deviation of a track from its central position (α , β , or γ) results in the rotation of the Dovey prism due to the signals obtained from the logic circuit 14 ; this also results in the rotation of the sine-cosine potentiometer 29, whose output voltage controls the speed of the motors M_1 and M_2 via the control circuits 16 and 15 . A special shutter placed on the axis of the prism controls the motion of the drive screws by means of magnetic clutches which are operated by photo-diodes and relays. The motors employed have a comparatively small speed range (500 to about 7 000 r.p.m.). Consequently, at certain angular positions φ_2 of the prism which correspond to the predominant direction of motion along one of the coordinates X_1 or Y_1 , the system automatically produces a discrete displacement of the track along one of the coordinates by means of a magnetic clutch operating at a small constant velocity. The above deficiency of the motors limits the measurement of the track-

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An Instrument for

displacement velocities to 30 - 160 μ /sec. The accuracy and the stability of the automatic following of a track is increased by introducing a feedback path into the system which corrects the velocity ratio of the motors M_1 and M_2 . The feedback loop employs the mismatch error signal from the logical circuit 14. The system operates as a switching servo mechanism with discontinuous control proportional to the error signal. If this system is used for the automatic measurement of the scattering or coordinates its operating speed along a track can reach 150 μ /s. The error in the measurement of the second differences is $\pm 0.03 \mu$. When used in the simultaneous measurement of scattering and ionisation, the speed is 20 μ /s. The authors make acknowledgment to N.A. Dobrotin, I.M. Frank, I.Ya. Barit for cooperation and to V.A. Ryabov, G.I. Yegorov and their collaborators of the Physics Institute of the AS USSR, who took part in this work.

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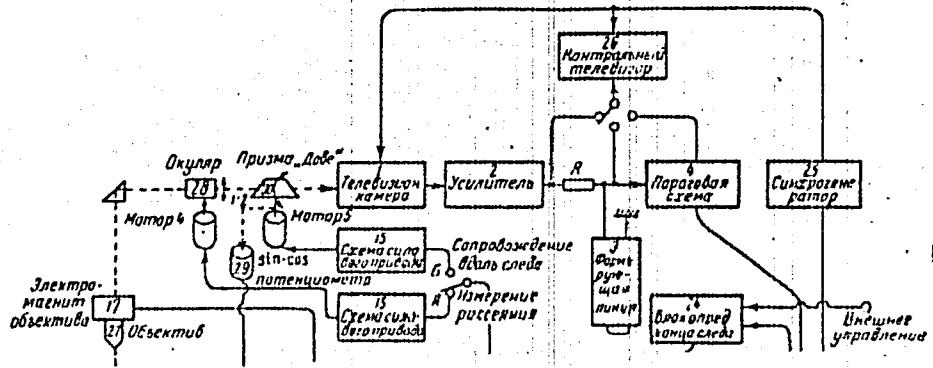
S/120/61/000/002/008/042
E192/E582

There are 4 figures and 7 references: 3 Soviet and 4 non-Soviet.

ASSOCIATION: Fizicheskiy institut AN SSSR (Physics Institute of the AS USSR)

SUBMITTED: April 25, 1960

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VCRONKOV, A.Ye.; SOLOV'YEVA, M.F.; SUKHOV, L.V.; TRET'YAKOVA, M.I.;
CHERNYAVSKIY, M.M.

Use of a device for the automatic measurement of ionization
and momentum from tracks of relativistic particles. Prib. i
tekh. eksp. 9 no.4:75-77 Jl-Ag '64. (MIRA 17:12)

1. Fizicheskiy institut AN SSSR.

VORONKOV, Anatoliy Yefimovich, inzh.; KORABLEV, Lev Nikolayevich,
inzh.; MURIN, Igor' Dmitriyevich, inzh.; SHTRANYKH,
Igor' Vladimirovich, kand. tekhn. nauk; SHTEYNBOK, G.Yu.,
inzh., ved. red.; SOKOLOV, I.D., inzh., red.; SOROKINA,
T.M., tekhn. red.

[High-speed multichannel pulse height analyzer]. Bystrodei-
stvujuushchii mnogokanal'nyi amplitudnyi analizator. Moskva,
Filial Vses. in-ta nauchn. i tekhn. informatsii, 1957. 63 p.
(Perevodoi nauchno-tehnicheskii i proizvodstvennyi opyt.
Tema 41. No.P-57-16/1) (MIRA 16:3)
(Pulse techniques (Electronics))
(Electronic measurements)

VORONKOV, A. Ye., ZHDANOV, G. B. and SUKHOV, L. V.

"Experiments on automatic measurements of scattering and ionization
on the tracks of fast single charged particles in photoemulsion"

Fourth International Colloquium on Photography (Corpuscular) - Munich,
West Germany, 3-8 Sep 62

ACCESSION NR: ARL014612

S/0269/64/000/001/0014/0015

SOURCE: RZh. Astronomiya, Abs. 1.51.105

AUTHOR: Balaishite, V.; Voronkov, B.

TITLE: Determination of periodic orbits in the three-dimensional limited circular three-body problem by the numerical quadratures method

CITED SOURCE: Byul. Astron. observ. Vil'nyussk. un-ta, no. 4, 1962, 34-40

TOPIC TAGS: periodic orbit, orbit, three-body problem, quadrature, orbital inclination, orbital eccentricity, orbital element, retrograde motion, asteroid, orbital motion, Jupiter, perihelion, symmetric conjunction, symmetric opposition, synodic period

TRANSLATION: In a three-dimensional case of the limited circular three-body problem there are periodic orbits with a moving line of nodes, similar to the solutions obtained by Schatzschild for the two-dimensional case of this problem (see RZhAstr, 1956, №. 3, 1630). The eccentricity and inclination of such solutions

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ACCESSION NR: AR4014612

are related by the condition that the secular motion of the argument of perihelion is equal to zero. The longitudes of the perihelion and the node, as well as the mean anomaly of an asteroid, should satisfy the conditions of symmetric conjunctions and oppositions. The dependence of eccentricity on orbital inclination is studied by a numerical method for the case of commensurability of the mean motions of the asteroid and Jupiter of the type 2:1. The conditions of symmetric conjunctions and oppositions were selected in such a way that at the initial moment the asteroid was situated at the perihelion of the orbit and in conjunction with Jupiter. The accompanying table gives the values of eccentricity, mean motion, the semimajor axis of the periodic orbit, and also the relative change of the synodic period and the secular change of the initial longitude as a function of orbital inclination. The values for inclination used range from 10 to 170° at 10° intervals. The table shows that for small inclinations the eccentricities should be large, of the order of 0.78-0.79. Small eccentricities are possible only for inclinations close to 180°, that is, in the case of retrograde motions. The mean motions of asteroids moving in orbits with the stated initial conditions are less than double the mean motion of Jupiter. Yu. Batrakov.

DATE ACQ: 19Feb64

SUB CODE: AS

ENCL: 00

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ACCESSION NR: AR4014612

S/0269/64/000/001/0014/0015

SOURCE: Rzh. Astronomiya, Abs. 1.51, 105

AUTHOR: Balaishite, V.; Voronkov, B.

TITLE: Determination of periodic orbits in the three-dimensional limited circular three-body problem by the numerical quadratures method

CITED SOURCE: Byul. Astron. observ. Vil'nyussk. un-ta, no. 4, 1962, 34-40

TOPIC TAGS: periodic orbit, orbit, three-body problem, quadrature, orbital inclination, orbital eccentricity, orbital element, retrograde motion, asteroid, orbital motion, Jupiter, perihelion, symmetric conjunction, symmetric opposition, synodic period

TRANSLATION: In a three-dimensional case of the limited circular three-body problem there are periodic orbits with a moving line of nodes, similar to the solutions obtained by Schatzschild for the two-dimensional case of this problem (see AZhAstr, 1956, No. 3, 1630). The eccentricity and inclination of such solutions are related by the condition that the secular motion of the argument of perihelion is equal to zero. The longitudes of the perihelion and the node, as

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ACCESSION NR: AR4014612

well as the mean anomaly of an asteroid, should satisfy the conditions of symmetric conjunctions and oppositions. The dependence of eccentricity on orbital inclination is studied by a numerical method for the case of commensurability of the mean motions of the asteroid and Jupiter of the type 2:1. The conditions of symmetric conjunctions and oppositions were selected in such a way that at the initial moment the asteroid was situated at the perihelion of the orbit and in conjunction with Jupiter. The accompanying table gives the values of eccentricity, mean motion, the semimajor axis of the periodic orbit, and also the relative change of the synodic period and the secular change of the initial longitude as a function of orbital inclination. The values for inclination used range from 10 to 170° at 10° intervals. The table shows that for small inclinations the eccentricities should be large, of the order of 0.78-0.79. Small eccentricities are possible only for inclinations close to 180° , that is, in the case of retrograde motions. The mean motions of asteroids moving in orbits with the stated initial conditions are less than double the mean motion of Jupiter. Yu. Batrakov.

DATE ACQ: 19Feb64

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VORONKOV, B.

Technical servicing of vending machines. Sov. Torg. 34 no.11:27-39 N
(MERA 13:11)
'60.
(Vending machines)

- 1. VORONIKOV, B. A.
- 2. USSR (600)
- 4. Planets, Minor
- 7. Notes on observations of the minor planet 236 (69) in 1951. Astron. tsir. No. 127, 1952.

May 1953. Unclassified.

o Monthly List of Russian Accessions, Library of Congress.

1. VORONKOV, B. A.
2. USSR (600)
4. Planets, Minor
7. Observations of minor planets at the Vilnius Astronomical Observatory of the Vilnius State University. Astron. tsir. No. 129, 1952.
9. Monthly List of Russian Accessions, Library of Congress. May 1953. Unclassified.

VORONKOV, B.A.

Observations of minor planets at the Vil'nyus Astronomical Observatory
of the Vil'nyus State University. Astron. tsir. no. 136:7-8 Mr '53.
(MLRA 6:6)

1. Vil'nyusskaya astronomicheskaya observatoriya Vil'nyuskogo gosudarst-
vennogo universiteta. (Planets, Minor)

VORONKOV, B.A.

Improved elements of the orbit of minor planet Holmia (378).
(MLRA 7:1)
Astron.tsir. no.140:7-9 Ag '53.

1. Vil'nyusskaya Astronomicheskaya observatoriya VGU.
(Planets, Minor)

L 32767-66 EWT(m)/T WW/DJ
ACC NR: AP6010127 (N) SOURCE CODE: UR/0122/66/000/003/0041/0044

33
B

AUTHOR: Voronkov, B. D.

ORG: none

TITLE: The study of the centrifugal lubrication of rolling bearings

SOURCE: Vestnik mashinostroyeniya, no. 3, 1966, 41-44

TOPIC TAGS: pressure lubrication, lubrication equipment, lubrication technique, roller bearing

ABSTRACT: The centrifugal lubrication of rolling bearings in high speed units is investigated. The experimental device, using No. 204 bearings and rotating at 3,500, 9,500, 13,500, and 19,500 rev/min is shown in Fig. 1. Tests were carried out with the T (baseline), industrial #20 and #45 oils. The article presents the characteristics of the oils, the change in bearing temperature as a function of the angular velocity of the shaft, the change in the coefficient of loss as a function of angular velocity, and the change in the temperature of the bearings as a function of the radial load. Orig. art. has: 5 formulas, 7 figures, and 1 table.

UDC: 621.822.6-72

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L 32767-66
ACC NR: AP6010127

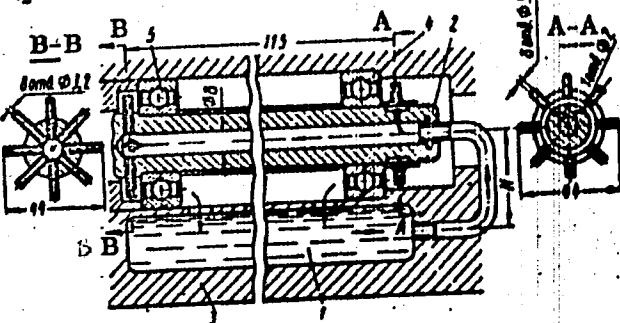


Fig. 1 Cross section of the centrifugal supply of lubricant to rolling bearings.

1 - Oil tank; 2 - Shaft; 3 - Block; 4 and 5 - ball bearings.
omb. - aperture.

SUB CODE: 11 / SUBM DATE: none / ORIG REF: 003
13 /

Card 2/2 BLQ

VORONKOV, B.G., assistent; KAMINSKIY, Ya.A., prof.; ORLOV, G.F.,
dots.; PASHKOV, B.I., dots.; BURMISTROV, V.G., dots.;
ZHARENKOV, Ye.B., red.

[Commercial machinery and apparatus] Torgovye mashiny i
apparaty. Moskva, Ekonomika, 1964. 318 p.
(KIR 18:1)

VORONKOV, B. D., inzh.

Using Pitot tubes in investigating the self-lubrication of
antifriction bearings of vertical shafts. Vest. mashinostr.
42 no.10:27-30 0 '62. (MIRA 15:10)

(Bearings(Machinery)—Lubrication)

VORONKOY, B.S., kand.tekhn.nauk

Achieving optimum processes in some relay control systems.
(MIHA 13:7)
Trudy MAI no.112:39-49 '59.
(Automatic control)

VORONKOV, B. S.

phi.2

PHASE I BOOK EXPLOITATION

SOV/5295

Avtomaticheskoye regulirovaniye aviadvigateley; sbornik statey
(Automatic Control of Aircraft Engines; Collection of Articles)
No. 2. Moscow, Oborongiz, 1960. 134 p. 3,900 copies printed.
Ed.: Shevyakov, A. A.; Ed.: K. I. Grigorash; Technical Ed.: L. A.
Garnukhina; Managing Ed.: A. S. Zaymovskaya, Engineer.

PURPOSE: This book is intended for engineers specializing in aircraft engine design and operation.

COVERAGE: This collection of 7 articles deals with various systems of aircraft engine control based on pneumatic, hydraulic, thermal, and electrical phenomena. One of the articles discusses nuclear reactors as objects to be regulated. No personalities are mentioned. References follow each article.

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Foreword

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- Stepanov, G. P. Errors in the Operation of Pneumatic Reducers
Providing Proportional Reduction of Pressure 5
- Vlasov-Vlasyuk, O. B. Determining Dynamic Errors in Investigating
Real SAR (Sistema avtomaticheskogo regulirovaniya--Automatic
Regulating System) Equipment on Modeling Stands 24
- Kolpakova, N. P. Pneumatic Mechanism as an Element of an Auto-
matic Control System 53
- Voronkov, B. S. Nuclear Reactors as Objects To Be Regulated 66
- Nefedova, V. I. Computing Static Characteristics of Linearized
Relay Amplifiers Having Polarized Relays 107
- Kolosov, S. P. On Temperature-Forcing Devices in Electric
Windings 123

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Automatic Control (Cont.)

SOV/5295

Prakhov, A. M. On the Actual Speed of Liquids in the Nozzle Out-
let of a Centrifugal Atomizer 131

AVAILABLE: Library of Congress

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Card 3/3

BALASHOV, M.A.; VORONKOV, B.S.; YELAGIN, Ye.B.; KISELEV, L.N.; KOLOSOV, S.P.; LEONT'YEVA, V.P.; NEFEDOVA, V.I.; STROMILOV, V.M.; SOKOLOV, N.I.; TISHCHENKO, N.M.; UDALOV, N.P.; PETROV, B.N., akademik, red.; GRIGORASH, K.I., red. izd-va; HOZHIN, V.P., tekhn. red.

[Handbook on the design of components and systems of automatic control; a manual for the preparation of course and diploma projects] Rukovodstvo po proektirovaniu elementov i sistem avtomatiki; posobie po kursovomu i diplomnomu proektirovaniyu [By] M.A. Balashov i dr. Pod red. B.N. Petrova. Moskva, Gos. nauchno-tekhn. izd-vo Oborongiz. No.4. 1961. 311 p. (MIRA 15:3)

1. Moscow. Aviationsionnyy institut imeni Sergo Ordzhonikidze.
(Automatic control) (Electronics)

PETROV, B.N.; VORONKOV, B.S.; KOLPAKOVA, N.P.

Review of A. A. Sheviakov's book "Automatic control of aviation power systems." Avtom. i telem. 22 no.4:556-557 Ap '61.
(MIRA 14:4)

(Airplanes—Electronic equipment)(Airplanes—Engines)
(Sheviakov, A.A.)

VORONKOV, D.A., inzh.; DOLGIKH, V.G.

Organization of welding operations. Energ.stroi. no.24:86-88
'61. (MIRA 15:4)

1. Montazhnnyy uchastok tresta "Sevzapenergomontazh" (for Voronkov). 2. Zaveduyushchiy laboratoriya svarki tresta "Sevzapenergomontazh" (for Dolgikh).
(Narva region--Electric power plants--Design and construction)
(Welding)

ANDRUSHKO, A.F., prepodavatel'; VORONKOV, E.N., prepodavatel',
KUETSKIY, G.A., prepodavatel', MALYSHEV, G.A., prepodava-
tel'; SETYUKOV, L.I., prepodavatel'; SOKOLOV, A.A., prepodavatel';
KHIRIN, A.A., prepodavatel'; SHALIMOV, K.V., prof.; ENUTIN, V.V.,
red., LARIONOV, G.Ye., tekhn. red.

[Specialized guide to semiconductors and semiconductor devices]
Spetsial'nyi praktikum po poluprovodnikam i poluprovodniko-
vym priborom. Moskva, Gos. energ. izd-vo, 1962. 303 p.
(MIRA 15:2)

(Semiconductors) (Transistors)

VORONKOV, E.N., inzh.

Semiconductors. Prom.energ. 19 no.7:38-41 Jl '64.

(MIRA 18:1)

"APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R001860920002-3

VORONKOV, E.N., inzh.

Diodes and transistors. Prom. energ. 19 no. 8:40-42 Ag '64.
(NIRI 17:11)

APPROVED FOR RELEASE: 03/20/2001

CIA-RDP86-00513R001860920002-3"

L 36396-66 EWT(m)/T/EWP(t)/ETI
ACC NR: AP6018784

IJP(c) RDW/JD

SOURCE CODE: UR/0070/66/011/003/0480/0483

(A)

57
14

AUTHOR: Shalimova, K. V.; Bulatov, O. S.; Voronkov, E. N.; Dmitriyev, V. A.

ORG: Moscow Power Engineering Institute (Moskovskiy energeticheskiy institut)

TITLE: Producing cadmium telluride films with a hexagonal structure

SOURCE: Kristallografiya, v. 11, no. 3, 1966, 480-483

TOPIC TAGS: cadmium telluride, vacuum sublimation, crystal orientation, temperature dependence, x ray photography, x ray diffraction analysis, cubic crystal, crystal growth

ABSTRACT: A study was made of the crystal modification of CdTe films prepared by vacuum sublimation in argon (10^{-1} - 10^{-2} mm Hg) on glass substrates heated from 70° to 400°C. The original CdTe material was sublimated at 500° to 800°C and had a cubic modification. Some specimens were prepared by evaporating pure Cd and Te in the sublimation chamber. The crystal structures of the grown crystals were analyzed by x-ray diffraction and electron microscopy. In all cases, only crystals with cubic modifications were formed, the thinner films having (111) parallel to the substrate; by decreasing the substrate temperature and increasing the thickness, this orientation disappeared. When the original material was simultaneously evaporated with metallic Cd and Te, the structure became hexagonally modified. X-ray patterns of the cubic and hexagonally mo-

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ACC NR: AP6018784

dified crystals and a photograph of the CdTe hexagonal films are given. The amount and intensity of the hexagonal lines were related to the substrate temperature, speed of evaporation of the Cd and Te and the argon pressure. The greatest percentage of hexagonal phase was obtained at argon pressures of about 10^{-2} mm Hg. The interplanar distances and line intensities of the hexagonal CdTe crystals were tabulated for 22 different planes. The lattice parameters of hexagonal CdTe were determined: $a=4.58 \text{ \AA}$, $c=7.50 \text{ \AA}$ and $c/a=1.637$. These data corresponded well with published results. Orig. art. has: 2 figures, 1 table.

SUB CODE: 20,11/ SUBM DATE: 03Jun65/ ORIG REF: 009/ OTH REF: 001

Card 212MLP

VORONKOV, F.F., inzh.

Removal of dust from the cooling systems of main line electric locomotives. Elektrotehnika 35 no.11:19-20 N 164.
(MIRA 18:6)

VORONKOV, F.F.; FESKOVETS, V.S.

Dust collection by air filter systems of main-line electric locomotives. Sbor. nauch. trud. EINII 2:219-2:28 '62.
(MIRA 16:8)

(Electric locomotives—Ventilation)
(Dust collectors)

ZOLOTAREV, V.I.; PEKSHEV, Yu.A.; AVSENEV, Yu.M.; KAPRANOV, I.A.; KISVYANTSEV,
L.A.; SHVETSOV, N.I.; TELEGIN, Ya.I.; POTAPOV, V.I.; KISVYANTSEV,
L.A.; ZYKOV, A.A.; METRUSOV, A.A.; SEMIN, V.P.; MAKSIMOVA, A.P.;
NIKOLAYENKO, Zh.I.; VOLKOV, N.V.; KALASHNIKOV, M.A.; FLAKSIN, S.V.;
POPOV, N.N.; KARSHINOV, L.N.; YAKIMOVA, T.A.; BASHKANIKHIN, I.K.;
KETKOVICH, A.Ya.; SHALASHOV, V.P.; VORONKOV, F.N.; VMKSHIN, G.K.;
CHISTYAKOV, M.A.; IVANOV, N.I., red.; SLADKOVSKIY, M.I., red.;
LIPNIKOVA, Ye., red.; MOSKVINA, R., tekhn.red.

[Economic development of the people's democracies] Razvitiye ekono-
miki stran narodnoi demokratii; obzor za 1957 g. Pod red. N.I.
Ivanova i dr. Moskva, Izd-vo sots.-ekon.lit-ry, 1958. 619 p.
(MILIA 127)

1. Moscow. Nauchno-issledovatel'skiy kon'yunkturnyy institut.
(Economic conditions)

VORONKOV, F.N.; LEVCHUK, K.V., red.; MUKHANOVA, V.V., tekhn. red.

[Development of the national economy of the Romanian People's Republic; statistical tables] Razvitiye narodnogo khoziaistva Rumynskoi Narodnoi Respublikii; statisticheskie pokazateli. Moskva, Vneshtorgizdat, 1958. 154 p. (MIRA 11:9)
(Romania--Statistics)

VORONKOV, F. N.

ZOLOTAREV, V.I.; AVSEHEV, Yu.M.; KAPRANOV, I.A.; KISVIANTSEV, L.A.; PIKSHEV, Yu.A.; SHVETSOV, N.I.; TELEGIN, Ya.I.; POTAPOV, V.I.; KISVIANTSEV, L.A.; ZIKOV, A.A.; NEFEDOV, A.A.; SENIN, V.P.; MAKSIMOVA, A.P.; NIKOLAYENKO, Zh.I.; VOLKOV, N.V.; KALASHNIKOV, A.M.; PLAKSIN, S.V.; POPOV, N.N.; KARSHINOV, L.N.; YAKIMOV, T.A.; BASHKANIKHIN, I.K.; KETKOVICH, A.Ya.; SHALASHOV, V.P.; VORONKOV, F.N.; VEKSHIN, G.E.; CHISTYAKOV, M.A.; IVANOV, N.I., red.; SLADKOVSKIY, M.I., red.; LEPMIKOVA, Ye., red.; MOSKVIN, R., tekhn.red.

[Development of the economy of the people's democracies; a survey for 1957] Razvitiye ekonomiki stran narodnoi demokratii; obzor za 1957 g. Pod red. N.I. Ivanova i dr. Moskva, Izd-vo sotsial'no-ekon. lit-ry, 1958. 610 p. (MIRA 12:2)

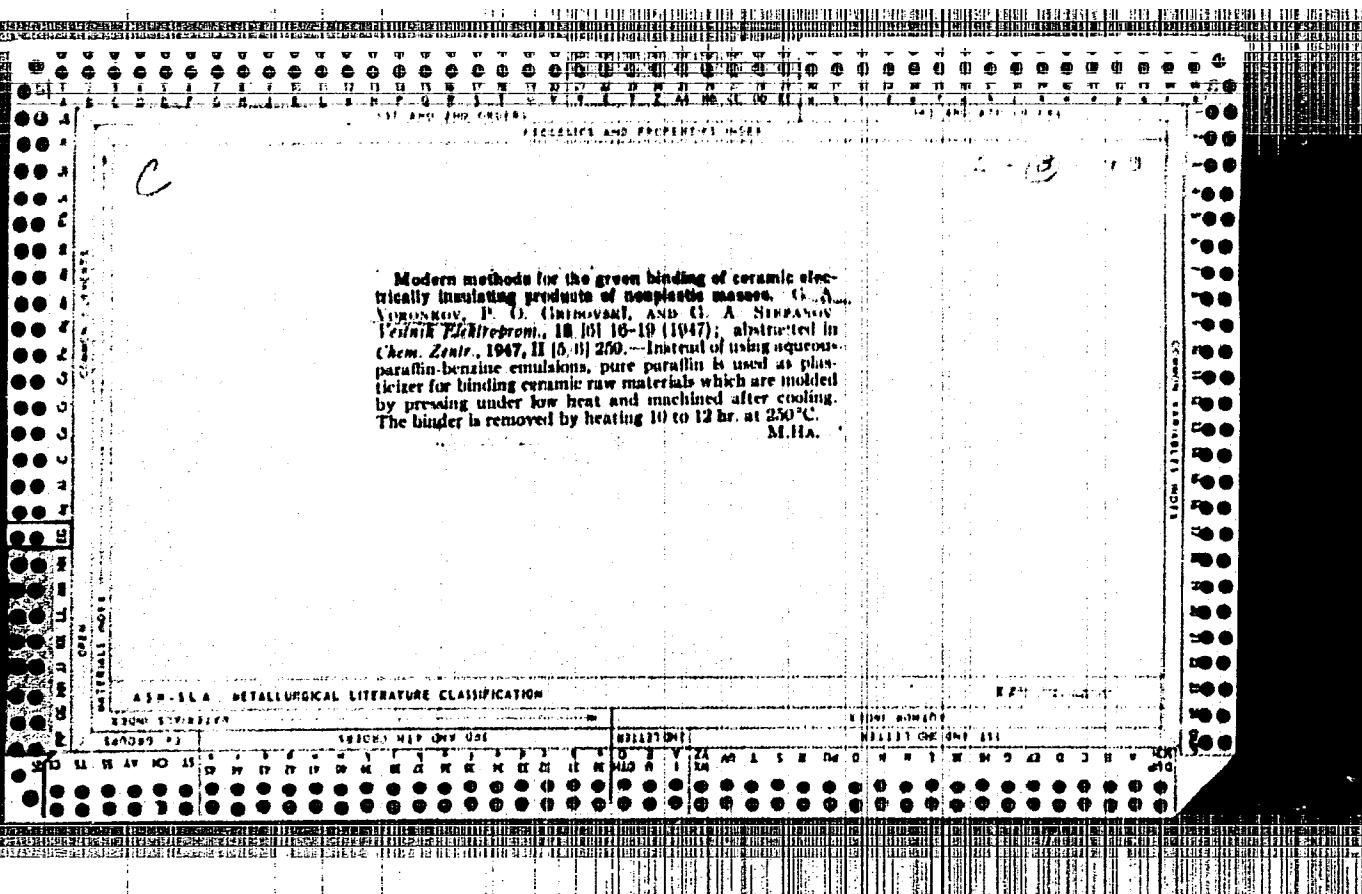
1. Moscow. Nauchno-issledovat. kon'yunkturnyy institut.
(People's democracies) (Economic conditions)

VORONKOV, F.F.

Operating modes of the ventilators of main line locomotives. Sbor.
nauch. trud. ElNII 3:192-201 '63. (MIRA 17:4)

FUTURYANSKIY, M.; VORONKOV, G.

Brief news. Stomatologiya no.2:61-62 Mr-Ap '54.
(Stomatology) (MLRA 7:4)



VORONKOV, G.A., inzhener; GRIBOVSKIY, P.O., inzhener; STEPANOV, G.A., kandidat
tekhnicheskikh nauk.

Modern methods of molding ceramic electrical insulation products from
non-plastic material. Vest.elektroprom. 18 no.6:16-19 Je '47. (MLRA 6:12)

1. GIEKI.

(Electric insulators and insulation)

KOVALENKO, P.I., st. nauchn. sotr., red.; STEPANENKO, O.R., st. nauchn. sotr., red.; LITVAK, L.B., zasl. deyatel' nauki prof., red.; VOL'FOVSKIY, O.I., dots., red.; VORONKOV, G.L., red.

[Problems of the control of alcoholism; lecturer's aid]
Voprosy bor'by s alkogolizmom; v pomoshch' lektoru.
Izd.3., ispr. i dop. Kiev, Zdorov'ja, 1964. 92 p.
(MIRA 18:1)

1. Kharkov, Ukrains'kyi derzhavnyi psykhonevroplogichnyi instytut.

NIKITIN, Yu.I.; VORONKOV, G.L., red.; CHUCHUPAK, V.D., tekhn. red.

[Health and efficiency are incompatible with alcohol] Zdorov'e
i rabotosposobnost' nesovmestimy s alkogolem. Kiev, Gos.med.
izd-vo USSR, 1961. 25 p. (MIRA 14:12)
(ALCOHOLISM)

VORONEKOV, G.L., Cand Med Sci--(diss) "Electro-encephalographic studies in incul-
ling therapy of schizophrenia." Kiev, 1953. 19 pp (Kiev Order o Labor Red
Banner Med Inst im Acad A.A. Bogomolats), 200 copies (KL,26-58,115)

-138-

VORONKOV, G.

1148. Electroencephalographic investigations in subjects with
patients subjected to minute shock therapy
Each July 1955 No. 1062 Report 27 Nov.
Poster No. 6770. Bipolar EEG encephalogram was carried out
in 18 patients before and after the minute therapy. Some abnormal
activity was noted before treatment (super-synkinetic waves
and sharp waves) and was gone following cessation of
treatment. In all cases the patient was conscious.
Some patients showed a prolonged unconsciousness following permanent
loss of consciousness. In the initial stage of the hyper-
excitability there was no response to the most
stimulus appeared. In deep hypoglycemia (equivalent to parallel
states) δ -rhythm dominated, periodic decelerations of heart rate
was observed, and there was no response to the light stimulus.
When clonic contractions appeared at the initial stage of the convul-
sions the increase in potential (up to 116 μ V) and a low frequency
appeared with a subsequent flattening of the amplitude. A
decrease in the excitability of the brain was not observed. In
all cases the patient was conscious following the treatment.

VORONKOV, G.L.; SHEKHTMAN, M.L.

Tele-electrocardiographic study of an electrospasmodic seizure.
Zhur. nevr. i psikh. 64 no. 12:1845-1851 '64. (MIRA 18:1)

1. Kafedra psichiatrii (zaveduyushchiy - prof. Ya. P. Frumkin)
Kiyevskogo redena Trudovogo Krasnogo Znameni meditsinskogo
instituta im. Bogomol'tsa i Kiyevskaya gorodskaya klinicheskaya
psikhonevrologicheskaya bol'nitsa im. Pavlova (glavnyy vrach
P.N.Lepekhov).

FRUMKIN, Yakov Pavlovich, prof.; VORONKOV, Georgiy Leonidovich,
dots.; ABASHEV, A.L., red.; NARINSKAYA, A.L., tekhn. red.

[School atlas of psychiatry] Uchebnyi atlas psichiatrii.
Kiev, Gosmedizdat USSR, 1962. 379 p. (MIRA 16:4)
(PSYCHIATRY)

VORON'KOV, G. M.

Khimia kremneorganicheskikh soedinenii v robotakh russkikh i sovetskikh uchenykh (Chemistry of silicon organic compounds in the works of Russian and Soviet scientists). Leningrad, Leningradskii universitet, 1952

SO: Monthly List of Russian Accessions, Vol 6, No. 3, June 1953

VORON'KOV, G. M.

Science

Chemistry of silicon organic compounds in the works of Russian and
Soviet scientists, Leningrad, Leningradskii universitet, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

VORONKOV, G.N.

Combined method of studying processes which take place in mineral materials, ceramic mixtures and compositions during heating. (In: Soveshchanie po eksperimental'noi mineralogii i petrografii. 4th, Moscow, 1952. Trudy, Moskva, 1953. No.2, p.79-87). (MIR 7:3)

1. Gosudarstvennyy issledovatel'skiy elektrokeramicheskiy institut (GIEKI). (Thermal analysis) (Ceramic materials)

TUMANOV, S.G., doktor tekhn.nauk; VORONKOV, G.N., kand.tekhn.nauk;
MASLENNIKOVA, G.N., kand.tekhn.nauk; TITOVA, V.G., inzh.

Zirconium porcelain. Trudy GIEKI no.2:14-20 '57.
(Porcelain) (Zirconium) (MIRA 11:?)

VORONKOV, G.N., kand.tekhn.nauk; MASLENNIKOVA, G.N., kand.tekhn.nauk;
BUCHENKOVA, A.F., inzh.

Effect of the mineralogical composition of the body on the mechanical strength of high-voltage porcelain. Trudy GIEKI no.4:17-25
'60. (MIRA 15:1)

(Ceramic materials--Analysis)
(Electric insulators and insulation)

VORONKOV, G.N., kand.tekhn.nauk; MEDVEDOVSKAYA, E.I.

~~Decomposition of zirconium in the presence of CaCO₃. Trudy GIEKI~~
no.2:109-113 '57.
(Zirconium) (Calcium carbonate)

(MIRA 11:7)

VORONOKOV, G.N.

112-6-11867

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr6, p.13 (USSR)

AUTHOR: Voronkov, G.N., Zvyagil'skiy, A.A., and Krétova, N.F.

TITLE: High-Voltage Porcelain of Better Electromechanical Properties from Boron-Containing Raw Material (Vysokovol'tnyy farfor s povyshennymi elektromekhanicheskimi svoystvami na osnove borosoderzhashchego syr'ya)

PERIODICAL: Tr. Gos. issled.elektrokeram. in-ta, 1956, Nr1, pp.5-16

ABSTRACT: As it was necessary to improve the mechanical and electrical characteristics of porcelain a new type of porcelain was developed in GIEKI on the basis of a boron-containing (asharit) ore, alumina, clay materials and a small amount of alkali-earth compounds. No quartz or feldspar was introduced. The use of ascharite ore ($2\text{MgO}\cdot\text{B}_2\text{O}_3\cdot\text{H}_2\text{O}$) as a fusing agent, instead of CaCO_3 or BaCO_3 , and also the introduction of commercial Al_2O_3 with an increased content of kaolin insured the close-packed structure of porcelain, in which the crystals of mullite formed a felt-like lattice and were uniformly distributed in the vitreous phase. There is a negligible amount of free sections of glass in the ascharite porcelain, but there are finely grained clusters of α -alumina. As the ascharite porcelain has a lower coefficient of linear expansion (3.9×10^{-6}) than the ordinary feldspar porcelain (6×10^{-6}), two new glazes (white and brown) were developed having less alkali oxide content. Due to

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112-6-11867

Translation from: Referativnyy zhurnal, Elektrotehnika, 1957, Nr 4, p.13 (USSR)

the more uniform structure and other factors the ascharite porcelain has almost double mechanical strength as compared to the feldspar porcelain. Nonalkaline vitreous phase insures higher values of volume electrical resistivity and electric strength, and lower values of the dielectric loss angle. Preparatory procedures and the manufacture of insulators can follow regular methods of the electrical porcelain manufacture. The only additional operation is the introduction of sinter into the mass of ascharite porcelain. Optimum firing temperature 1310 -1330°C. Ascharite and feldspar insulators can be fired jointly, but the sintering interval of the ascharite units is shorter than that of the ordinary electrical porcelain (30-40° against 60-80°). Thermographic and chemical investigations of the ascharite ore have shown that for electrical porcelain purposes it should have at least 22% B_2O_3 and 2% MgO. The density of ascharite ore should be at least 2.67 g/cm³, the firing loss should not be over 18%. Bibliography: 6 titles.

N.V.N.

Card 2/2

Vorontsov, etc. etc.

Dissertation: "Complex Thermographic Method of Investigation and Its Application In Ceramics." Cani Tech Sci, Moscow Order of Lenin Chemicotechnological Inst imeni D. I. Mendeleyev, 24 May 54. Vechernyaya Moskva, Moscow, 14 May 54.

SO: SUM 284, 26 Nov 1954

L 36224-65 RRP/EP/EPAL-1-2/EP/EPAL-2/EP/EPAL-2/EP/EPAL-1
Fab-10, Pr-4, Fe-4, N-4, M-4, H-4, S-4

ACCESSION NR: AP3014289

VIR/02/16/64/000/014/D1419/0090

AUTHOR: Voronkov, G. N.; Buchenkova, A. F.; Maidorovich, V. I.; Dmitrieva, N. N.

TITLE: Ceramic paste. Class 80, No. 164220

SOURCE: Byulleten' izobreteniy i tovarnykh znamkov, no. 14, 1964, 81-90

TOPIC CODE: ceramic product, electric insulator

Translation: A ceramic paste based on a raw material with a high K₂O:Na₂O ratio and used mainly for making high-voltage insulation. In order to produce articles with a low electrical loss tangent value and a high volumetric resistivity, the paste contains 31-40% by weight of quartz-sericite shale as a fluxing component and source of aluminum oxide.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy elektroceramichestkiy institut
(State Scientific Research Electroceramic Institute)

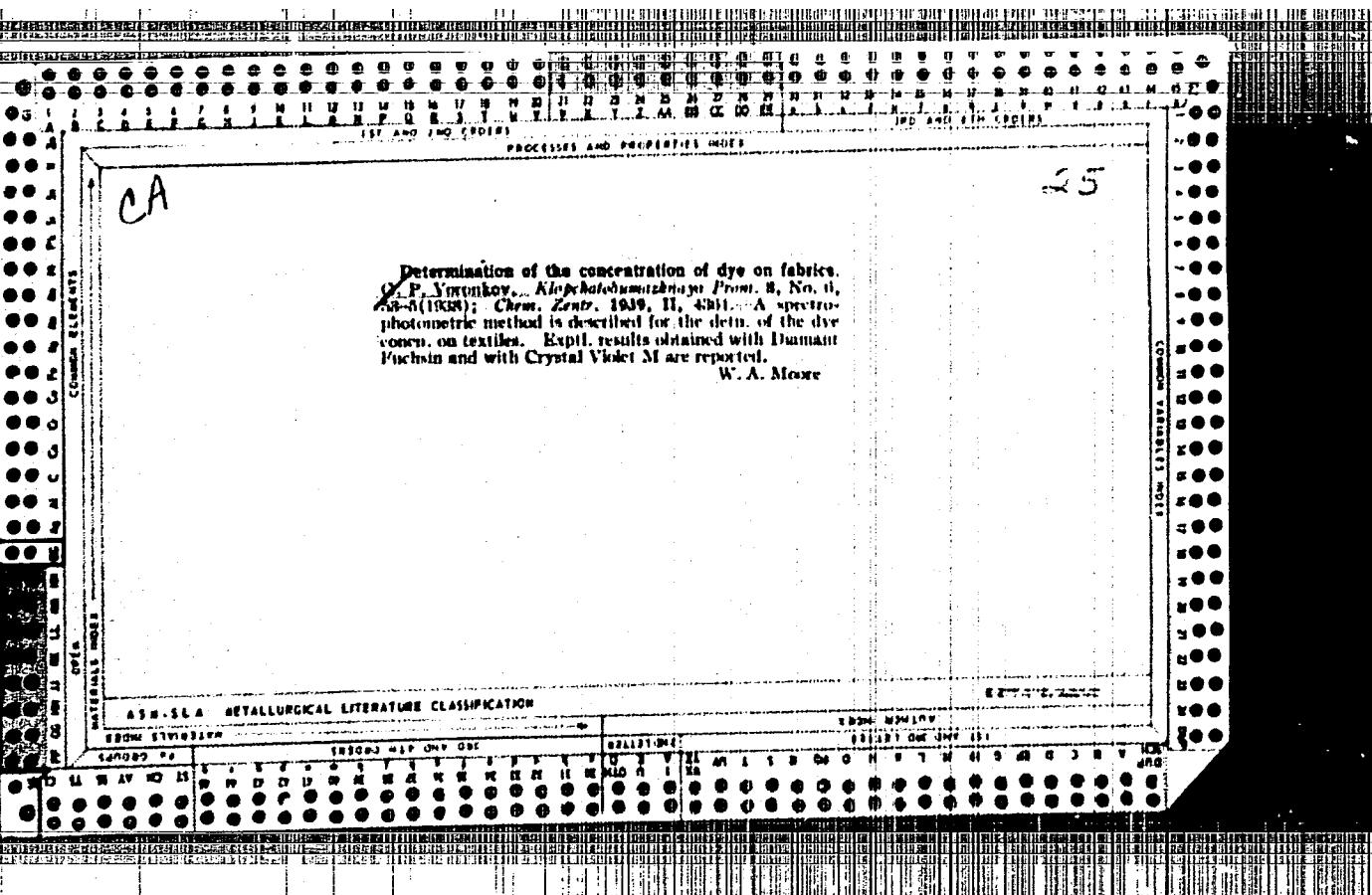
SUBMITTED: 09Apr63

INCL: 00

AUD COMM: III. IS

NO REP GOVT: 000

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A summary of spectral-visual methods used in the color and the dyeing industries. G. I. Vaynshteyn. Khimicheskie promyshlennosti, 1939, No. 2/3, 48-61; Khimi. Referat. Zhur., 1939, No. 6, 102.—A no. of methods used for the investigation of colors and dyes, including the transmitted and reflected light methods, are given. A description is also given of the quant. spectrometric method using the spectrodensitograph of Goldberg and Cailler which registers automatically the absorption curves of solid and liquid and of transparent and opaque colored substances.

W. R. Henn

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